

4. (Amended) The optical recording medium according to Claim 1, wherein the print-receiving layer contains fine particles having an average particle size of at most 200 nm and is printable with a water base ink by means of an ink jet printer.

5. (Amended) An optical recording medium which comprises a print-receiving layer as the outermost layer on the side opposite to a light incidence side, wherein the print-receiving layer has a pattern of concaves, convexes or a combination thereof.

8. (Amended) The optical recording medium according to Claim 5, wherein the difference in height of the concave/convex pattern is at least 0.1 μm .

10. (Amended) An optical recording medium which comprises a print-receiving layer as the outermost layer on the side opposite to the light incidence side, wherein a colored pattern is present on the print-receiving layer, and wherein the colored pattern has an XYZ color system chromaticity coordinate (x,y) of reflected light at an optional portion on the print-receiving layer to satisfy the formula (1):

$$(x-0.32)^2 + (y-0.32)^2 < 0.015 \quad (1).$$

Please add the following new claims.

--17. (New) The optical recording medium according to Claim 1, wherein the print-receiving layer comprises from 30 to 50% of fine particles of an inorganic substance.

18. (New) The optical recording medium according to Claim 5, wherein the print-receiving layer comprises from 30 to 50 wt.% of fine particles of an inorganic substance.

19. (New) The optical recording medium according to Claim 10, wherein the print-receiving layer comprises from 30 to 50 wt.% of fine particles of an inorganic substance.

20. (New) An optical recording medium comprising a print-receiving layer and a light incidence side,

wherein the print-receiving layer is an outermost layer on a side opposite to the light incidence side,

the print-receiving layer comprises two or more print-receiving areas, and

the print-receiving areas comprise resin mixtures of different colors.

21. (New) The optical recording medium of Claim 20, wherein the print receiving layer has a colored pattern having an XYZ color system chromaticity coordinate (x,y) of reflected light at a print-receiving area to satisfy formula (1):

$$(x-0.32)^2+(y-0.32)^2 < 0.015 \quad (1).$$

22. (New) The optical recording medium of Claim 20, wherein the XYZ color system chromaticity coordinates (x_1, y_1) and (x_2, y_2) of reflected light at two print-receiving areas of the print-receiving layer satisfy formula (2):

$$(x_1-x_2)^2+(y_1-y_2)^2 \leq 0.012 \quad (2).$$

23. (New) The optical recording medium of Claim 20, wherein the print-receiving layer is printable with a water base ink by means of an ink jet printer.

24. (New) The optical recording medium according to Claim 20, wherein the print-receiving layer contains fine particles having an average particle size of at most 200 nm and a cation resin, and is printable with a water base ink by means of an ink jet printer.

25. (New) The optical recording medium according to Claim 20, wherein the print-receiving layer comprises from 30 to 50% of fine particles of an inorganic substance. --

REMARKS

Claims 1-10 and 12-25 are active in the present application. Claim 11 has been canceled. Claim 1 has been amended to require the presence of a cation resin in the print-receiving layer. Support for the amendment is found in original Claim 4. Claim 8 has been amended to limit the difference in height of the convex/concave pattern to 0.1 μm . Support

for the amendment is found on page 19, lines 21-23. Claim 10 has been amended to incorporate the limitations of Claim 11. Claims 17-25 are new claims. Support for new Claims 17-19 is found on page 12, lines 21-26 and page 11, lines 10-11. Support for new independent Claim 20 is found on page 21, lines 15-20 and page 24, lines 18-24. Support for new Claims 21-24 is found in original Claims 11-14. Support for new Claim 25 is found on page 12, lines 21-26 and page 11, lines 10-11. No new matter is added.

REQUEST FOR RECONSIDERATION

Applicants thank Examiner Le and the Examiner's Supervisor Hoa Nguyen for the helpful and courteous discussion of November 6, 2002. During the discussion Applicants' U.S. representative presented arguments that the prior art cited by the Examiner does not disclose the incorporation of a cation resin in a print-receiving layer of an optical recording device. Applicants' U.S. representative presented further arguments stating that the optical recording medium of the present claims offers an advantage over prior art recording media by having a pattern on the print-receiving layer. Applicants' representative explained that the pattern allows the production of an optical recording medium which includes a maker's mark or trademark that does not interfere with the later printing of an image, pattern or characters onto the optical recording medium (see for example page 1, lines 14-20; page 2, lines 21-27; page 4, lines 6-11; and page 21, lines 15-27).

Applicants submit that one of ordinary skill in the art can appreciate the difficulties encountered when a second printed pattern is applied to a first printed pattern. These difficulties may include *inter alia* blotting of the first printed pattern by the ink applied to form the overlaying second pattern. The first pattern may also block the fixing or drying of the second pattern by interrupting the second applied ink from contacting the print-receiving layer.

Claim 1 has been amended to include a limitation that the print-receiving layer contains a cation resin. The cation resin of the present invention is described as "one having a cationic moiety in its molecule, and a cation modified product..." (page 13, lines 10-12). The presence of a cation resin permits the print-receiving layer to be printed with a water-based ink and provides water-resistance to the resulting image (page 12, line 27-page 13, line 4). Anionic water-soluble dyes may react with the cation resin thereby providing an improved image (page 13, lines 4-9). A variety of cation resins are disclosed (page 13, lines 10-25).

While the Examiner provided column 14, line 27 of the Komaki reference as support for the assertion that cation resins are disclosed in the prior art, Applicants note that the materials provided in column 14 of the reference (including Flowbeads EA 209, Staphyloid AC-3832 and Aerosil TT-600) are not the cation resins presently claimed.

None of the water-absorbing organic fillers (C) of the Komaki reference are cation type resins. The species disclosed in column 4, lines 2-9 are described as "examples of the water-absorbing organic filler (C) are not limited to specified ones but include fillers have hydroxy group, carboxy group, amino group or the like on the surface and/or in the interior thereof, more particularly, animal protein ultrafine particles such as Staphyloid AC-3832, Flowbeads EA-209, Collagen powder and the like." The Koike patent (U.S. 5,492,744) and Gillery patent (U.S. 4,920,006) do not disclose or describe cation resins. The prior art relied upon by the Examiner therefore does not contain an element of present Claim 1 and cannot anticipate or render obvious Claim 1.

Applicants respectfully request the withdrawal of the rejection of Claim 1 under 35 U.S.C. § 103(a) and § 102(e).

Claim 5 has been amended to clarify that the print receiving layer has a pattern. The Koike reference discloses that the prior art article may have concave and convex portions

"about 3 micron depth or less." The pattern of the Koike patent is formed by providing multiple layers of printing (printing layers) on the protective surface of the prior art article. As disclosed in the patent "[t]his printing layer can usually be formed by a technique of screen printing or offset printing" (column 13, lines 19-20). The concave and convex portions that may be present on the prior art article result from printing layers of different thickness. The concave and convex portions of the prior art are built up from multiple printing layers (column 13, lines 17-18) whereas the present concaves or convexes are a part of the print-receiving layer (page 19, last line - page 20, line 6). Present Claim 5 is therefore novel in view of the prior art relied upon by the Examiner.

Further, the Koike patent does not disclose that the convex and concave portions form a pattern to transmit visual information. In contrast, the presently claimed pattern of concaves and convexes achieves this result (page 5, lines 11-13). Present Claim 5 is therefore not obvious in view of the Koike patent.

Applicants therefore respectfully request the withdrawal of the rejection of independent Claim 5 under 35 U.S.C. §103(a) in view of Komaki and Koike.

Claim 10 has been amended to incorporate the limitations of Claim 11. Amended Claim 10 now requires the pattern on the print-receiving layer to have chromaticity coordinates which satisfy the requirements of Formula 1. The incorporation of the limitation of Claim 11 in Claim 10 overcomes the rejection under 35 U.S.C. §102(b) in view of Komaki.

The Examiner rejected dependent Claim 11 under 35 U.S.C. §103(a) by combining the disclosure of Komaki, Koike and Gillery (U.S. 4,920,006). Gillery discloses colored metal alloy/oxynitride coatings (see Title). The patent discloses transparent substrates that are coated with a titanium oxynitride film applied by a sputtering process (see Claim 1 and column 3, lines 41-48). The dielectric film of the Gillery patent is used for architectural coatings on glass (column 2, lines 27-28). The purpose of coating an architectural substrate

is to provide a transparent material that offers, for example, solar energy control (such as that of a tinted window). The coated substrates (windows) of Gillery are flat unpatterned surfaces whose purpose includes blocking solar energy from entering a building. In contrast, the pattern of the presently claimed invention is used for marking an optical recording medium with such marks it is important that the colored pattern be discernible to the naked eye (i.e., adding a trademark). Thus the function of the pattern in the presently claimed invention is not the same function as that described in the prior art article.

The structure of the claimed invention and the coated articles disclosed in Gillery are also different. The architectural coating of the prior art is intended as an architectural coating on glass (column 2, lines 26-29) whereas the presently claimed invention is an optical recording medium that comprises plastic substrates that have significantly less surface area and different shapes than typical building windows. Further, the coatings of the Gillery patent are applied by sputtering processes in vacuum (column 3, line 57-column 4, line 37) whereas the colored patterns of present Claim 10 may be applied via standard printing techniques such as inkjet printing.

As discussed in the preceding two paragraphs, both the structure and function of the prior art coated article and the presently claimed optical recording medium are different. The Gillery patent therefore represents non-analogous art which cannot properly be combined with the other prior art references to render the presently claimed invention obvious (MPEP §2141.01(a)). In view of the differences in the structure and function of the Gillery coated articles and the presently claimed optical recording medium, it is not appropriate to rely on the Gillery patent to render the presently claimed invention obvious. Applicants submit that amended Claim 10 is not obvious in view of the other prior art references cited by the Examiner.

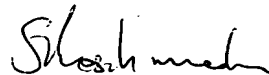
The presently claimed invention is further patentable in view of new dependent Claims 17-19. The new dependent claims require that the optical recording media include 30-50% of fine particles of an inorganic substance. The Komaki patent specifically requires that the amount of inorganic particles (water-absorbing inorganic filler (D)) be 1-20% by weight (column 2, lines 33-35).

New independent Claim 20 and dependent Claims 21-25 have been added. New Claim 20 is drawn to an optical recording medium which has a print-receiving layer comprising at least two print-receiving areas each comprising a differently colored resin. The print-receiving areas form a colored pattern. The optical recording medium of Claim 20 contains resin domains of different color which make up a colored pattern. Print-receiving areas of different colors allow a first pattern to be visible on the optical recording medium. Since the pattern is a part of the print receiving layer (i.e., embedded in the matrix resin) it does not interfere with patterns subsequently printed on the optical recording medium. Therefore a visible trademark or maker's mark can identify the manufacturer of the "blank" optical recording medium without impairing the printability of the optical recording medium for later resellers. Such an optical recording device is described as Example 1 on page 24, line 1 through page 25, line 5.

Applicants submit the amendment to the claims places all claims in condition for allowance. Applicants respectfully request the withdrawal of the outstanding rejections and the passage of all now pending claims to Issue.

Respectfully submitted,

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